

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An exhaust gas recirculation valve comprising:

an exhaust passage tube;

a valve element pivotally mounted entirely within the exhaust passage tube;

a linear actuator; and

a gear train including a rack gear operatively connected to the linear actuator, the rack gear adapted to move in a substantially linear direction upon activation of the linear actuator, and at least one rotatable gear meshing with the rack gear and operatively connected to the valve element to cause rotation of the valve element upon actuation of the linear actuator.

Claim 2 (original): The apparatus of claim 1, wherein the linear actuator is mounted to the exhaust passage tube.

Claim 3 (original): The apparatus of claim 1, wherein the exhaust passage tube is aligned along an axis and the linear direction is parallel to the axis.

Claim 4 (original): The apparatus of claim 1, wherein the rack gear includes teeth disposed on a rod directly driven by the linear actuator.

Claim 5 (original): The apparatus of claim 1, further including a return spring operatively connected to the rack gear for biasing the rack gear to a non-actuated position.

Claim 6 (original): The apparatus of claim 1, further including an adjustable stop mechanism for limiting the rotational travel of the valve element.

Claim 7 (original): The apparatus of claim 6, wherein the adjustable stop mechanism includes a stop lever operatively connected to the valve element for rotation therewith.

Claim 8 (original): The apparatus of claim 1, wherein the linear actuator is a solenoid.

Claim 9 (currently amended): ~~The apparatus of claim 1,~~ An exhaust gas recirculation valve comprising:

an exhaust passage tube;

a valve element pivotally mounted within the exhaust passage tube, wherein the valve element is mounted to a spindle and the gear train includes a rotatable gear mounted to the spindle[[]];

a linear actuator; and

a gear train including a rack gear operatively connected to the linear actuator, the rack gear adapted to move in a substantially linear direction upon activation of the linear actuator, and at least one rotatable gear meshing with the rack gear and operatively connected to the valve element to cause rotation of the valve element upon actuation of the linear actuator.

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Claim 10 (original): The apparatus of claim 1, further including an adjustable stop mechanism for limiting the rotational travel of the valve element.

Claim 11 (original): The apparatus of claim 10, wherein the adjustable stop mechanism includes a stop lever mounted to the spindle.

Claim 12 (original): The apparatus of claim 1, wherein the gear train includes a plurality of rotatable gears.

Claim 13 (original): The apparatus of claim 12, wherein the rack gear is disposed along at least a portion of the length of the actuator rod.

Claim 14 (currently amended): An exhaust gas recirculation valve comprising:
an exhaust passage tube having a first axis;

a valve element pivotally mounted entirely within the exhaust passage tube;

an apparatus adapted for linear movement along a second axis substantially parallel to the first axis, the apparatus adapted for linear movement along the second axis adapted to be selectively activated;

an actuator rod directly driven by the apparatus adapted for linear movement along the second axis, the actuator rod adapted to move in a substantially linear direction upon activation of the apparatus adapted for linear movement along the second axis; and

AI a gear train including a rack gear, disposed along at least a portion of the length of the actuator rod, and at least one rotatable gear meshing with the rack gear, the rotatable gear being operatively connected to the valve element and adapted to cause rotation of the valve element upon actuation of the apparatus adapted for linear movement along the second axis.

Claim 15 (original): The apparatus of claim 14, further including a return spring operatively connected to the actuator rod for returning the actuator rod to a non-actuated position when the apparatus adapted for linear movement along the second axis is not activated.

Claim 16 (original): The apparatus of claim 14, further including an adjustable stop mechanism for limiting the rotational travel of the valve element.

Claim 17 (original): The apparatus of claim 16, wherein the adjustable stop mechanism includes a stop lever operatively connected to the valve element for rotation therewith.

Claim 18 (currently amended): A method of actuating an exhaust gas recirculation valve, the method comprising the steps of:

mounting a valve element entirely within an exhaust passage tube;

energizing a linear actuator;

moving a rack gear operatively connected to the linear actuator; and

rotating at least one rotatable gear operatively connected with [[a]] the valve element to thereby rotate the valve element.

Claim 19 (original): The method of claim 18, wherein the energizing step includes providing electrical current to a solenoid.
